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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/970,312 11/14/97 ALLEN

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EXAMINER

LEE, J

ART UNIT

PAPER NUMBER

3673

17

DATE MAILED:

07/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	08/970,312	ALLEN ET AL.
	Examiner	Art Unit
	Jong-Suk (James) Lee	3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____ .
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1,2 and 4-8 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____ .
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Receipt is acknowledged of the Request for Reconsideration filed on May 11, 2001.

2
3
4
5
6 ***Information Disclosure Statement***
7 2. The information disclosure statement filed May 11, 2001 fails to comply with 37
8 CFR 1.97(c) because it lacks a statement as specified in 37 CFR 1.97(e), or the fee set forth in 37
9 CFR 1.17(p). It has been placed in the application file, but the information referred to therein has
10 not been considered.

11
12 ***Claim Objections***

13 3. Claim 1 is objected to because of the following informalities:

14 Claim 1, line 4: "fom" should be --from--.

15 Claim 1, line 5: "the hull" should be --the floating hull--.

16 Appropriate correction is required.

17
18 ***Claim Rejections - 35 USC § 112***

19 4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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1 The specification shall conclude with one or more claims particularly pointing out and
2 distinctly claiming the subject matter which the applicant regards as his invention.
3

4 5. Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being
5 indefinite for failing to particularly point out and distinctly claim the subject matter which
6 applicant regards as the invention.

7 In claim 1, lines 1-3, the limitation "In a spar structure for offshore hydrocarbon recovery
8 operations, a vertically oriented elongated floating hull with a buoyant upper section; a ballasted
9 lower section" renders the claim indefinite because it is not clear as to how the structural elements
10 are associated with each other.

11 It is suggested to be --In a spar structure for offshore hydrocarbon recovery operations,
12 the spar structure comprising: a vertically oriented elongated floating hull having a buoyant upper
13 section and a ballasted lower section-- for clarity. Claims 2 and 4-8 are also considered to be
14 indefinite because they are dependent upon claim 1.

15 Appropriate correction is required.

16

17 *Claim Rejections - 35 USC § 103*

18 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness
19 rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
21 section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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1 such that the subject matter as a whole would have been obvious at the time the invention was made to a person
2 having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the
3 manner in which the invention was made.

4
5 This application currently names joint inventors. In considering patentability of the claims
6 under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was
7 commonly owned at the time any inventions covered therein were made absent any evidence to
8 the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor
9 and invention dates of each claim that was not commonly owned at the time a later invention was
10 made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35
11 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

12
13 7. Claim 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton'467
14 (US 5,558,467) in view of Moisdon (US 4,656,959).

15 Horton'467 discloses a deep water offshore apparatus comprising of a vertically oriented
16 elongated floating hull (24) with a buoyant upper section; a ballasted lower section (70, 72); a
17 truss member (26) separated the floating hull from the lower ballasted section; an anchoring
18 system (28, 30) connecting the hull to the ocean floor (see Figs.1-3; col.3, lines 22-67; col.4, lines
19 1-62; col.5, lines 3-62).

20 However, Horton'467 fails to disclose or fairly suggest a vertically oriented fairing shaped
21 profile section formed by an outer wall of the hull. Moisdon discloses a vertical watercraft
22 utilizing buoyancy principle comprising of a hull (12) having a vertically oriented fairing shaped
23 profile section being formed by an outer wall (65) of the hull (12) as depicted in Figs. 4-6 (see
24 Figs. 1-6; col.2, lines 52-68; col.3, lines 1-66; col.5, lines 8-43).

25 Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify the outer wall for the hull portion to be fairing- shaped as taught by Moisdon in order to provide less resistance to lateral forces resulting from water current drag and vortex-induced-vibration (VIV).

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton'467 as modified by Moisdon, as applied to claims 2 and 6, respectively, and further in view of Schuh. The teachings of Horton'467 modified by Moisdon have been discussed above.

However, the teachings of Horton'467 modified by Moisdon fails to specifically disclose the chord to thickness ratio between about 1.10 and 1.50. Schuh discloses a streamlined riser pipe comprising of a "ultra-short" fairing assembly (18-22) inherently having the chord to thickness ratio being in the range of 1.10 and 1.50 as depicted in Fig.2 (see Figs. 1-2; col. 2, lines 33-69; col.3, lines 23-35).

Therefore, in view of Schuh, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the fairing shaped profile section of the hull of Horton'467, as modified by Moisdon, by incorporating the ultra short fairing shape to the fairing shaped profile section of the hull as taught by Schuh in order to provide the advantage of having a much lower drag coefficient wherein, the lower drag coefficient, the lower the resistance of the floating hull to fluid flow.

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Obviousness-Type Double Patenting

2 9. The nonstatutory double patenting rejection, whether of the obviousness-type or non-
3 obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy
4 reflected in the statute) so as to prevent the unjustified or improper timewise extension of the
5 "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.
6 See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759
7 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761
8 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*,
9 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

10
11 A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be
12 used to overcome an actual or provisional rejection based on a nonstatutory double patenting
13 ground provided the conflicting application or patent is shown to be commonly owned with this
14 application. See 37 CFR 1.130(b).

15 Effective January 1, 1994, a registered attorney or agent of record may sign a terminal
16 disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17
18 10. Claims 1, 2 and 4-8 are rejected under the judicially created doctrine of obviousness-type
19 double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,196,768 in view of
20 Horton'467 (US 5,558,467).

21 Although the conflicting claims are not identical, they are not patentably distinct from each
22 other because the present claimed invention is somewhat broader recitation of the '768 patent, for
23 example, by claiming the vertically oriented fairing such as "a vertically oriented fairing shaped
24 profile section presented on the hull" to claim 1 of the '768 patent and somewhat detailed
25 recitation of the '768 patent by including the further limitation to the spar structure, such as "a

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1 truss member separated the floating hull from the lower ballasted section” to claim 1 of the ‘768
2 patent.

3 Therefore, in respect to above discussions, it would have been obvious to one of ordinary
4 skill in the art at the time the invention was made to use the teachings of claims 1-3 of ‘768 patent
5 as a general teachings for the spar structure as claimed by the present application. The instant
6 claims obviously encompass the claimed invention of the ‘768 Patent.

7 Further, with respect to the detailed recitation for the anchor of the present claimed
8 invention, the ‘768 patent fails to disclose or fairly suggest, in the body of claims 1-3, the truss
9 member separated the floating hull froom the lower ballasted section. Horton’467 discloses a
10 deep water offshore apparatus comprising of a vertically oriented elongated floating hull (24) with
11 a buoyant upper section; a ballasted lower section (70, 72); a truss member (26) separated the
12 floating hull from the lower ballasted section; an anchoring system (28, 30) connecting the hull to
13 the ocean floor as discussed in Paragraph No.

14 Therefore, it would have been obvious to one of ordinary skill in the art at the time the
15 invention was made to modify the spar fairing/structure of ‘768 patent by adding the truss
16 member with ballasted lower section to the bottom portion of the structure in order to enhance
17 the balance of the spar structure floating in the water.

18
19 11. The obviousness-Type double patenting rejection is based on a judicially created doctrine

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¹ grounded in public policy is primarily intended to prevent the prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application of patent is shown to be commonly owned with this application. See 37 C.F.R. 1.130 (b).

Response to Arguments

9 12. Applicant's arguments with respect to claims 1, 2 , 4 and 5 have been considered but are
10 moot in view of the new ground(s) of rejection.

Allowable Subject Matter

13. Claims 6-8 would be allowable **i)** if rewritten to overcome the rejection(s) under 35
U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the
base claim and any intervening claims, **and ii)** upon the timely filing of a terminal disclaimer.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's
19. disclosure: Allen et al.'672 discloses an ultra-short fairings for supressing vortex-induced-

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1 vibration (VIV).

2 15. Any inquiry concerning this communication or earlier communications from the examiner
3 should be directed to Jong-Suk (James) Lee whose telephone number is (703) 308-6777. The
4 examiner can normally be reached between the hours of 6:30 AM to 3:00 PM Monday thru
5 Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
6 David J. Bagnell, can be reached on (703) 308-2151. The fax phone number for this Group is
7 (703) 305-3597.

8 Any inquiry of a general nature or relating to the status of this application or proceeding
9 should be directed to the Group receptionist whose telephone number is (703) 308-2168.

10
11 Jong-Suk (James) Lee
12 July 19, 2001


DAVID BAGNELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600